

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

THROUGHPUTER, INC.,

Plaintiff,

v.

AMAZON WEB SERVICES, INC.,

Defendant.

Civil Action No. 1:22-cv-01095-DAE

JURY TRIAL DEMANDED

**MOTION OF DEFENDANT AMAZON WEB SERVICES, INC.
TO DISMISS THE AMENDED COMPLAINT UNDER
RULE 12(b)(6) FOR FAILURE TO STATE A CLAIM**

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I. INTRODUCTION

“No one is entitled to a patent for that which he did not invent.” *Agawam Woolen Co. v. Jordan*, 74 U.S. 583, 602 (1868). Indeed, the Constitution directs Congress to enact laws “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and *Inventors* the exclusive Right to *their respective Writings and Discoveries*.” U.S. Const. art. I, § 8, cl. 8 (emphases added). The framers thus explicitly contemplated that Congress would create a system that promotes innovation by offering patent protection only to *inventors*.¹ Consistent with this specific grant of Constitutional authority, Congress enacted Section 101 of the Patent Act, which limits the issuance of patents only to “whoever invents,” *i.e.*, the innovators whose hard work contributes meaningfully to the public store of knowledge. The claims that plaintiff ThroughPuter asserts against Amazon² in this case offend this core tenet of our patent system.

That is because—based on undisputed admissions in the amended complaint and public records, all of which the Court may properly consider in resolving a Rule 12 motion—ThroughPuter and its principal did not “invent” what the three patents in this case claim. Instead, ThroughPuter filed a series of patent applications, with claims copied from *Amazon’s* patents. ThroughPuter then filed this lawsuit hoping that Amazon practices its own patents and therefore infringes ThroughPuter’s copied claims. ThroughPuter cannot reasonably dispute this scheme.

Indeed, ThroughPuter filed each continuation application that issued as each asserted patent two years *after* the Amazon patent with mirror-image claims issued. ThroughPuter admitted

¹ James Madison, who is credited for including the Patent and Copyright Clause in the Constitution, explained at the time the clause was included that “[t]he right to useful inventions . . . belong[s] to *the inventors*.” (Shamilov Decl., Ex. A at 2 (emphasis added).) And an inventor has always been “[o]ne who finds out something new; one who contrives and produces any thing not before existing; a contriver,” as Webster’s first dictionary defined the word in 1828. (*Id.*, Ex. B.)

² “Amazon” refers to individually and collectively to defendant Amazon Web Services, Inc., and the related corporate entities under the common ownership of Amazon.com, Inc.

that the claims in the asserted patents are “substantially the same” as Amazon’s earlier-issued patent claims and it drafted its claims by “focus[ing] on the way Amazon claimed the accused product in patent applications.” (Dkt. 25 at 19.) While ThroughPuter’s litigation scheme is egregious, it is made worse by the fact that ThroughPuter concealed its copying from the Patent Office. It rewrote the titles, abstracts, and claims of its earlier applications, and then falsely represented to the Patent Office that its amendments added no new subject matter. Because ThroughPuter cannot adequately and plausibly allege that the named inventor of the asserted patents, its principal Mr. Mark Sandstrom, invented the subject matter claimed in the patents, the patents are invalid under § 101. The amended complaint must be dismissed under Fed. R. Civ. P. 12(b)(6).

II. FACTUAL BACKGROUND

In this case, plaintiff ThroughPuter asserts three patents—U.S. Patent Nos. 11,347,556 (the “’556 patent”), 11,385,934 (the “’934 patent”) and 11,500,682 (the “’682 patent”) (collectively the “asserted patents”)—against Amazon Web Services, Inc. (“Amazon”). (Dkt. 48 (“Amend. Compl.”).) ThroughPuter filed the original complaint on October 27, 2022 asserting two patents, the ’556 patent and ’934 patent (Dkt. 1 (“Compl.”)), and filed the amended complaint on August 4, 2023, adding the ’682 patent (Amend. Compl.).³ ThroughPuter alleges that field programmable gate array (FPGA) technology of an Amazon cloud computing service called Elastic Compute Cloud (EC2) F1 infringes the patents. (*Id.* ¶ 2.)

A. Amazon filed patent applications directed to security issues in FPGAs years before ThroughPuter filed the applications for the asserted patents.

In 2016, Amazon filed two U.S. patent applications: No. 15/279,232 (the “’232 Application”), filed on September 28, 2016, and No. 15/280,624 (the “’624 Application”), filed

³ The Amended Complaint was entered on the docket on August 7, 2023.

on September 29, 2016. (*See* Declaration of Saina S. Shamilov (“Shamilov Decl.”), Exs. C (U.S. Pat. No. 10,223,317 (the “’317 patent”)) at 1, D (U.S. Pat. No. 10,282,330 (the “’330 patent”)) at 1.) On March 21, 2019, Amazon filed U.S. Patent Application No. 16/361,007 (the “’007 Application”), which is a division of the ’624 Application. (*See id.*, Ex. E (U.S. Pat. No. 10,705,995 (the “’995 patent”)) at 1.)

The ’232 and ’624 Applications were published, and thus became publicly available, in March 2018, and issued in March and May 2019 as U.S. Pat. Nos. 10,223,317 and 10,282,330, respectively. (*See id.*, Exs. C (’317 patent) at 1, D (’330 patent) at 1.) The ’007 Application was published, and became publicly available, in July 2019, and issued in July 2020 as U.S. Pat. No. 10,705,995. (*Id.*, Ex. E (’995 patent) at 1.) ThroughPuter discusses the ’317 patent, ’330 patent, and ’995 patent (collectively, the “Amazon patents”) in its amended complaint, and attaches them as Exhibits 4, 5, and 6. (Amend. Compl. ¶¶ 46-62; *id.*, Exs. 4 (’317 patent), 5 (’330 patent), 6 (’995 patent).)

The Amazon patents, titled “Configurable Logic Platform” and “Configurable Logic Platform with Multiple Reconfigurable Regions,” are directed to resolving security issues associated with the use of FPGAs. (Shamilov Decl., Ex. C (’317 patent) at Abstract, 1:61-2:20; *id.*, Ex. D (’330 patent) at Abstract, 1:65-2:33; *id.*, Ex. E (’995 patent) at Abstract, 2:7-42.) FPGAs, or Field Programmable Gate Arrays, are hardware chips, or integrated circuits, that can be programmed after deployment to perform different functions. (*Id.*, Ex. C (’317 patent) at 1:61-2:8.) That is why they are “Field Programmable.” Programming an FPGA configures the physical structures of the chip, called configurable logic blocks, to perform a desired function. (*Id.* at 2:24-28, 3:51-62.) FPGAs can perform their programmed functions much faster than software running on a general-purpose processor that cannot be reconfigured for each desired function. (*Id.* at 2:21-

40.) Accordingly, FPGAs can be used as hardware accelerators to speed up functions that would otherwise be performed by software. (*Id.*)

The Amazon patents address security issues that arise when FPGAs are offered as part of a cloud computing service. (*Id.* at 1:5-14, 2:9-20.) In such a service, different user programs run in separate “virtual machines” on a collection of shared server computers in the cloud. (*Id.* at 14:20-40, 14:65-15:11.) Security issues may arise if one user’s configurable logic (*i.e.*, the specific functions programmed in an FPGA by one user) is overwritten or modified by another user, or otherwise interferes with the other user programs running on the same servers. (*Id.* at 2:9-20.)

To address these security problems, the Amazon patents describe and claim a system in which the user’s reconfigurable logic within an FPGA is mediated by “host logic” controlled and provided by the cloud provider. (*Id.* at 2:41-3:3.) The host logic on the FPGA ensures that the user’s reconfigurable logic does not interfere with the rest of the system and the other applications running on the shared cloud server. This includes preventing the user’s reconfigurable logic on the FPGA from directly accessing the connection to the shared cloud server, also known as the physical interconnect. (*Id.*) The host logic also prevents the user’s reconfigurable logic from reconfiguring the FPGA itself (and thus potentially erasing the protective “host logic”). (*Id.*)

The claims of the Amazon patents capture this host logic invention, requiring a function that “allows information to be transmitted over the physical interconnect *and prevents the [first or second] reconfigurable logic region from directly accessing the physical interconnect.*” (*See id.* at 28:22-28 (emphasis added); *id.*, Ex. D (’330 patent) at 36:43-56 (same).) The claims also recite a host logic function that “provid[es] restricted access to the configuration port from the physical interconnect” (*see id.*, Ex. C (’317 patent) at 28:17-21); *id.*, Ex. D (’330 patent) at 36:38-42 (same)), or “for separately encapsulating each of the reconfigurable logic regions” (*see id.*, Ex. E

(’995 patent) at 36:28-29.

B. Three years after Amazon’s patents published and two years after they issued, ThroughPuter filed applications for the asserted patents, changed their titles and abstracts to track Amazon’s patents, copied the claims of Amazon’s patents, and then filed this lawsuit.

The asserted patents are related and identify on their face a series of five parent applications, the earliest of which was filed in 2014. (Shamilov Decl., Ex. F (’556 patent) at 1-2 (“Related U.S. Application Data” section); *id.*, Ex. G (’934 patent) at 1-2 (same).) All five parent applications share the same specification and bear an identical title, “Concurrent Program Execution Optimization.”⁴ (*Id.*, Exs. I at 9-37, J at 3-31, K at 8-37, L at 32-61, M at 1-30.)

As the title indicates, the parent applications disclose and claim a system for concurrently executing a collection of programs in parallel in a multiprocessor computer. (*See id.*, Ex. N (U.S. Pat. No. 9,448,847⁵ (the “’847 patent”)) at 1.) The identical abstracts explain that the purported invention is “[a]n architecture for a load-balanced groups of multi-stage manycore processors shared dynamically among a set of software applications.” (*See id.* at Abstract; *see also id.*, Exs. I at 42, J at 36, K at 6, L at 63, M at 32 (abstracts in parent applications).) The first sentence of

⁴ In considering motions to dismiss, the Court may properly consider matters of public record, including communications with the Patent Office and court records. *Uniloc USA, Inc. v. ADP, LLC*, 772 F. App’x 890, 898 n.3 (Fed. Cir. 2019) (“The prosecution history is part of the intrinsic record of the patent” and “thus subject to judicial notice”); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1008 n.2 (Fed. Cir. 2018) (“the court may consider ‘matters of public record,’” such as “[p]rosecution histories”); *Grecia Est. Holdings LLC v. Meta Platforms, Inc.*, No. 6:21-CV-00677-ADA, 2022 WL 2019296, at *6 (W.D. Tex. June 6, 2022) (communications with the Patent Trial and Appeal Board are “matters of public record” and thus “are subject to judicial notice and appropriate for this Court to consider at the pleading stage”); *Crook v. Galaviz*, No. EP-14-CV-193-KC, 2015 WL 502305, at *5 (W.D. Tex. Feb. 5, 2015), *aff’d*, 616 F. App’x 747 (5th Cir. 2015) (“Pursuant to Federal Rule of Evidence 201, the Court may, and does, take judicial notice of its own court records because they are both ‘generally known within the trial court’s territorial jurisdiction’ and ‘can be accurately and readily determined from sources whose accuracy cannot be questioned.’”).

⁵ U.S. Patent. No. 9,448,847 is the patent that issued from the first of the five parent applications. (*See* Shamilov Decl., Ex. F at 2 (“Related U.S. Application Data” identifying “application no. 14/318,512, filed on Jun. 27, 2014, now Pat. No. 9,448,847”).)

the “Summary” of the invention states that “[a]n aspect of the invention provides systems and methods for arranging secure and reliable, concurrent execution of a set of internally parallelized and pipelined software programs on a pool of processing resources shared dynamically among the programs.” (*See id.*, Ex. N (’847 patent) at 2:15-19; *see also id.*, Exs. I at 11, J at 5, K at 11, L at 35, M at 4.) Consistent with the Summary and Abstract, the parent patents claim systems and methods for optimizing concurrent program execution, such as a “system for prioritizing instances of a software program for execution . . .” (*See, e.g., id.*, Ex. N (’847 patent) at 21:17-24:21 (claims).)

The detailed description and seven figures describe a system for dynamically assigning tasks from multiple applications executing in parallel to available processing cores in a multiprocessor system: “[T]he multi-stage manycore processor system 1 is shared dynamically among tasks of multiple application programs (apps) and instances (insts) thereof, with, for each of the apps, each task located at one of the (manycore processor) based processing stages 300.” (*Id.* at 10:23-27). The specification lists FPGAs among a laundry list of software and hardware including CPUs, GPUs, DSPs and ASPs that *could* be used in implementing the multiprocessor system: “Any of the cores 520 of a processor per FIG. 7 can comprise any types of software program and data processing hardware resources, e.g. central processing units (CPUs), graphics processing units (GPUs), digital signal processors (DSPs) or application specific processors (ASPs) etc., and in programmable logic (FPGA) implementation . . .” (*Id.* at 20:12-18.) But the patent does not describe or claim any technology specific to FPGAs, and does not describe any specific mechanisms for resolving security issues that may arise from the use of FPGAs with a cloud system.

Between August 2021 and July 2022, ThroughPuter filed three new applications in the

parallel processing family, which issued as the asserted patents.⁶ (Shamilov Decl., Exs. F ('556 patent) at 1, G ('934 patent) at 1; Ex. H ('682 patent) at 1; Amend. Compl., Exs. 1 ('556 patent), 2 ('934 patent), 3 ('682 patent).) As filed, the new applications included the same specification as the parallel processing patent applications, but now had a different title: instead of “Concurrent Program Execution Optimization,” the title became “Configurable Logic Platform with Reconfigurable Processing Circuitry” to refer to the “configurable logic platform” of Amazon’s patents. (Amend. Compl., Exs. 1 ('556 patent), 2 ('934 patent), 3 ('682 patent); *see also* Shamilov Decl., Ex. O ('556 patent file history) at 54 (showing title of “Concurrent Program Execution Optimization”), 45 (showing new title of “Configurable Logic Platform with Reconfigurable Processing Circuitry”); Shamilov Decl., Ex. P ('934 patent file history) at 19, 10; Shamilov Decl., Ex. Q ('682 patent file history) at 17, 19.)) ThroughPuter then filed an amendment and changed the abstracts and/or claims of the parent specification to copy and appropriate the inventions in the Amazon patents.

For example, as shown in the screenshots below taken from the file histories of the two new applications that led to the '556 and '934 patents, ThroughPuter deleted the *entire* Abstract from the parent applications, and inserted a new Abstract:

⁶ The '556 patent issued from a patent application filed on August 31, 2021. (Shamilov Decl., Ex. F at 1.) The asserted '934 patent issued from a patent application that was filed on September 9, 2021. (*Id.*, Ex. G at 1.) The asserted '682 patent issued from a patent application that was filed on July 7, 2022. (*Id.*, Ex. I at 1.)

AMENDMENTS TO THE SPECIFICATION

Please amend the Abstract as follows:

An architecture for a load-balanced-groups-of-multi-stage-manycore-processors-shared dynamically among a set of software applications, with capabilities for destination-task-defined intra-application-prioritization-of-inter-task-communications (ITC), for architecture-based-ITC performance-isolation-between-the-applications, as well as for prioritizing-application-task instances-for-execution-on-cores-of-manycore-processors-based-at-least-in-part-on-which-of-the task-instances-have-available-for-them-the-input-data, such as ITC-data, that they need-for-executing.

A configurable logic platform may include a physical interconnect for connecting to a processing system, first and second reconfigurable logic regions, a configuration port for applying configuration data to the first and second reconfigurable logic regions, and a reconfiguration logic function accessible via transactions of the physical interconnect, the reconfiguration logic function providing restricted access to the configuration port from the physical interconnect. The platform may include a first interface function providing an interface to the first reconfigurable logic region and a second interface function providing an interface to the first reconfigurable logic region. The first and second interface functions may allow information to be transmitted over the physical interconnect and prevent the respective reconfigurable logic region from directly accessing the physical interconnect. The platform may include logic configured to apportion bandwidth of the physical interconnect among the interface functions

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A configurable logic platform may include a physical interconnect for connecting the platform to a processor, a reconfigurable logic region having logic blocks configured based on configuration data, a configuration port for applying configuration data to the reconfigurable logic region, a reconfiguration logic function accessible via transactions of the physical interconnect and in communication with the configuration port, the reconfiguration logic function providing restricted access to the configuration port from the physical interconnect, and an interface function accessible via transactions of the physical interconnect and providing an interface to the reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the reconfigurable logic region from directly accessing the physical interconnect. The reconfiguration logic function may be implemented in the reconfigurable logic region.

(Shamilov Decl., Ex. O ('556 patent file history) at 3 (annotated); *id.*, Ex. P ('934 patent file history) at 29 (annotated).) In doing so, ThroughPuter changed the focus of the asserted '556 and '934 patents from an “architecture for a load balanced group of multi-stage manycore processors shared dynamically among a set of software applications [.]” that ThroughPuter purportedly invented, to “[a] configurable logic platform” that resolves security issues, including by “providing restricted access to the configuration port” and “prevent[ing] the respective reconfigurable logic region from directly accessing the physical interconnect” invented by Amazon.⁷ (*Id.*)

In its amendment, ThroughPuter also changed the claim language to recite Amazon’s inventions. For example, ThroughPuter cancelled the pending claim of the '934 patent application, which recited “[a] method for prioritizing instances of a software program for execution” and replaced it with a new claim reciting nearly verbatim the language from claim 1 of Amazon’s '317 patent. (*Compare id.*, Ex. P ('934 patent file history) at 30 *with id.* at 64.) Likewise, for the

⁷ ThroughPuter did *not* change the abstract of the application that led to the '682 patent, and that abstract confirms that ThroughPuter did not invent what it now claims. The abstract, describing the actual ThroughPuter’s true (alleged) invention, says *nothing* about logic for separately encapsulating reconfigurable logic regions, as the claims require.

applications that led to the asserted '556 and '682 patents, ThroughPuter cancelled the pending claims, and replaced them with new claims that are nearly verbatim copies of claim 1 of Amazon's '330 and '995 patents, respectively. (*Compare id.*, Ex. O ('556 patent file history) at 4-5 *with id.* at 43; *compare id.*, Ex. Q ('682 patent file history) at 11 *with id.* at 49.)

That the claims of the asserted patents are mere copies of Amazon's earlier-filed claims is undisputed. The tables below, which appear without annotation in ThroughPuter's own complaint (Amend. Compl. ¶¶ 51, 55, 59), include side-by-side comparisons of the representative claims of Amazon's patents and the near identical claims of ThroughPuter's asserted patents, and confirm that ThroughPuter copied Amazon's claims and made a few superficial changes (in red) that do not substantively change the scope of the claims. ThroughPuter itself agrees that the changes below are superficial, as it alleges in its complaint that there is "substantial identity" between both claim sets, and the asserted patents claim "substantially the same technology" as Amazon's patents. (*Id.*)

Amazon's '317 patent, Claim 1 (Patent issued on March 5, 2019)	ThroughPuter's '934 patent, Claim 1 (Application filed on September 9, 2021)
A configurable logic platform, the configurable logic platform comprising:	A configurable logic platform, the configurable logic platform comprising:
a physical interconnect for connecting the configurable logic platform to a processor;	a physical interconnect for connecting the configurable logic platform to a processor;
a reconfigurable logic region comprising logic blocks that are configured based on configuration data;	a reconfigurable logic region of an FPGA comprising logic blocks that are configured based on configuration data;
a configuration port for applying the configuration data to the reconfigurable logic region so that the reconfigurable logic region is configured based on configuration data;	a configuration port for applying the configuration data to the reconfigurable logic region so that the reconfigurable logic region is configured based on configuration data;
a control plane function accessible via transactions of the physical interconnect, the control plane function in communication with the configuration port, the control plane function providing only restricted access to the configuration port from the physical	a reconfiguration logic function accessible via transactions of the physical interconnect, the reconfiguration logic function in communication with the configuration port, the reconfiguration logic function providing only restricted access to the configuration port

interconnect; and	from the physical interconnect; and
a data plane function accessible via transactions of the physical interconnect, the data plane function providing an interface to the reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the reconfigurable logic region from directly accessing the physical interconnect,	an interface function accessible via transactions of the physical interconnect, the interface function providing an interface to the reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the reconfigurable logic region from directly accessing the physical interconnect,
wherein the control plane function is implemented in the reconfigurable logic region.	wherein the reconfiguration logic function is implemented in the reconfigurable logic region.

Amazon's '330 patent, Claim 1 (Patent issued on May 7, 2019)	ThroughPuter's '556 patent, Claim 1 (Application filed on August 31, 2021)
A configurable logic platform comprising:	A configurable logic platform comprising:
a physical interconnect for connecting the configurable logic platform to a processor;	a physical interconnect for connecting the configurable logic platform to a processor;
a first reconfigurable logic region comprising logic blocks that are configured based on configuration data corresponding to the first reconfigurable logic region;	a first reconfigurable logic region comprising logic blocks that are configured based on first configuration data corresponding to the first reconfigurable logic region;
a second reconfigurable logic region comprising logic blocks that are configured based on configuration data corresponding to the second reconfigurable logic region;	a second reconfigurable logic region comprising logic blocks that are configured based on second configuration data corresponding to the second reconfigurable logic region;
a configuration port for applying the configuration data to the first and second reconfigurable logic regions so that the first reconfigurable logic region is configured based on the configuration data corresponding to the first reconfigurable logic region and the second reconfigurable logic region is configured based on the configuration data corresponding to the second reconfigurable logic region;	a configuration port for applying the first and second configuration data to the first and second reconfigurable logic regions so that the first reconfigurable logic region is configured based on the first configuration data corresponding to the first reconfigurable logic region and the second reconfigurable logic region is configured based on the second configuration data corresponding to the second reconfigurable logic region;
a control plane function accessible via transactions of the physical interconnect, the control plane function in communication with the configuration port, the control plane function providing restricted access to the configuration port from the physical interconnect;	a reconfiguration logic function accessible via transactions of the physical interconnect, the reconfiguration logic function in communication with the configuration port, the reconfiguration logic function providing restricted access to the configuration port from

	the physical interconnect;
a first data plane function accessible via transactions of the physical interconnect, the first data plane function providing an interface to the first reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the first reconfigurable logic region from directly accessing the physical interconnect;	a first interface function accessible via transactions of the physical interconnect, the first interface function providing an interface to the first reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the first reconfigurable logic region from directly accessing the physical interconnect;
a second data plane function accessible via transactions of the physical interconnect, the second data plane function providing an interface to the second reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the second reconfigurable logic region from directly accessing the physical interconnect; and	a second interface function accessible via transactions of the physical interconnect, the second interface function providing an interface to the second reconfigurable logic region which allows information to be transmitted over the physical interconnect and prevents the second reconfigurable logic region from directly accessing the physical interconnect; and
arbitration logic configured to apportion bandwidth of the physical interconnect among at least the first data plane function and the second data plane function .	logic configured to apportion bandwidth of the physical interconnect among at least the first interface function and the second interface function .

Amazon's '995 patent, Claim 1 (Patent issued July 7, 2020)	ThroughPuter's '682 patent, Claim 1 (Application filed July 7, 2022)
An apparatus comprising:	An apparatus comprising:
a plurality of reconfigurable logic regions, each reconfigurable logic region comprising configurable hardware to implement a respective application logic design; and	a plurality of reconfigurable logic regions, each reconfigurable logic region comprising configurable hardware to implement a respective application logic design; and
host logic for separately encapsulating each of the reconfigurable logic regions, the host logic comprising:	logic for separately encapsulating each of the reconfigurable logic regions, the logic comprising
a host interface for communicating with a processor over a physical interconnect; and	a host interface for communicating with a processor over a physical interconnect; and
a plurality of data path functions accessible via the host interface, each data path function comprising a layer for formatting data transfers between the host interface and the application logic design of a corresponding reconfigurable logic region;	a plurality of data path functions accessible via the host interface, each data path function comprising a layer for formatting data transfers between the host interface and the application logic design of a corresponding reconfigurable logic region;

and wherein the host interface is configured to arbitrate between resources of the application logic designs of the respective reconfigurable logic regions, wherein the host interface is configured to enforce an apportionment of bandwidth of the data transfers over the physical interconnect generated by the application logic designs of the respective reconfigurable logic regions based on a programmed value of a control register of the host logic .	and wherein the host interface is configured to arbitrate between resources of the application logic designs of the respective reconfigurable logic regions, wherein the host interface is configured to enforce an apportionment of bandwidth of the data transfers over the physical interconnect associated with the application logic designs of the respective reconfigurable logic regions based on a programmed value representing at least one input bandwidth share .
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Each asserted patent was filed *two years after* the Patent Office issued the corresponding Amazon patent from which ThroughPuter copied what it now claims it invented. (*Compare* Shamilov Decl., Ex. C with Ex. G, Ex. D with Ex. F, Ex. E with Ex. H.) And the Patent Office allowed ThroughPuter’s copycat claims without ever knowing that ThroughPuter copied them from Amazon because ThroughPuter falsely represented to the Patent Office that its amendments to the title, abstract, and claims “introduce[d] no new matter,” and ThroughPuter concealed that it copied the claims from other patents. (*Id.*, Ex. O (’556 patent file history) at 11; *id.*, Ex. P (’934 patent file history) at 32; *id.*, Ex. Q (’682 patent file history) at 15.) Indeed, ThroughPuter never disclosed the issued Amazon patents to the examiner at all.⁸

⁸ In its opposition to the original Motion to Dismiss, ThroughPuter contends that it “cannot reasonably be accused of concealing the existence of the Amazon Patents from the Patent Office when it cited one of the *publications* that led to the Amazon Patents to the Patent Office.” (Dkt. 25 at 11.) Notably, however—and putting aside that ThroughPuter only disclosed one of the patent publications, which it buried in a list of dozens of other references—ThroughPuter does not dispute that it concealed the *issued* Amazon patents from the Patent Office. Disclosing issued patents to the Patent Office is materially different from merely disclosing patent applications or publications, as it would have prevented the Patent Office from issuing two separate patents with the same claims covering the same invention.

III. STATEMENT OF LEGAL ISSUES IMPLICATED BY THROUGHPUTER'S COPYING

A. ThroughPuter's Copying Implicates a Wide Range of Legal Theories and Defenses.

As the facts above make abundantly clear, ThroughPuter copied Amazon's patented inventions and failed to disclose its impermissible copying to the Patent Office. Such facts give rise to a host of legal issues with the asserted patents, ranging from unenforceability based on ThroughPuter's inequitable conduct before the Patent Office, to invalidity under Sections 102 and 103 because Amazon's (copied) patents are prior art and under Section 112 because the specifications of the asserted patents do not have adequate written description support for what is claimed, to patent ineligibility under Section 101.⁹ While each of these issues is a *separate* ground on which ThroughPuter's claim cannot succeed in this case, the present motion deals with only a single issue: invalidity of the asserted patents for failure to invent under Section 101. As explained below, this Section 101 issue should be resolved at the pleadings stage, as ThroughPuter has not adequately pled, and *cannot* adequately plead, facts sufficient to state a plausible claim of inventorship. Indeed, courts routinely resolves cases on the pleading stage pursuant to Section 101.

B. Dismissal Under Section 101 is Proper.

Section 101 of the Patent Act codifies the Constitutionally-mandated requirement that a patent may be awarded only to the *inventor* of the subject matter claimed: "Whoever *invents or discovers* any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, *may obtain a patent therefor*, subject to the conditions and requirements of this title." 35 U.S.C. § 101 (emphases added); *Packet Intel. LLC v. NetScout*

⁹ The remaining issues raised by ThroughPuter's blatant copying of Amazon's inventions will be litigated should the case proceed.

Sys., Inc., No. 2:16-cv-230-JRG, Dkt. 228 at 14 n.1 (E.D. Tex. Sept. 29, 2017) (“[t]he ‘Whoever invents’ language of 35 U.S.C.A. § 101 retains the prohibition on granting a patent to one who derived the invention from another” (citation omitted)). The Supreme Court thus long ago held that “[n]o one is entitled to a patent for that which he did not invent.” *Agawam Woolen Co.*, 74 U.S. at 602. Instead, the “rights in an invention *belong to the inventor.*” *Bd. of Trs. of LeLand Stanford Junior Univ. v. Roche Molecular Sys. Inc.*, 563 U.S. 776, 785 (2011) (emphasis added). An inventor is not a copier. *See Univ. of Utah v. Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.*, 734 F.3d 1315, 1323 (Fed. Cir. 2013) (“It is axiomatic that inventors are the individuals that conceive of the invention.”); *Thaler v. Vidal*, 43 F.4th 1207, 1211 (Fed. Cir. 2022) (noting requirement that an inventor must declare himself or herself “to be the *original* inventor”) (emphasis added); *Application of Sarkar*, 588 F.2d 1330, 1333 (C.C.P.A. 1978) (“The words ‘Whoever invents’ in § 101 are used in the sense of ‘whoever originates’”).

To survive a Rule 12 motion to dismiss, a complaint must allege facts that, when taken as true, “state a claim to relief that is plausible on its face.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007). Although the Court must generally accept the plaintiff’s factual allegations as true, this tenet “is inapplicable to legal conclusions.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). Similarly, the Court need not accept as true “conclusionary allegations” devoid of factual support. *Kaiser Aluminum & Chem. Sales, Inc. v. Avondale Shipyards, Inc.*, 677 F.2d 1045, 1050 (5th Cir. 1982) (citation omitted).

Based on ThroughPuter’s admissions in the complaint and public records, including both Patent Office records and court records—all of which this Court may consider at the motion to dismiss stage (*see supra* at 5, fn 4)—ThroughPuter did not *invent* what it now claims; ThroughPuter copied it from Amazon. The claims of the asserted patents are therefore ineligible

for patenting under § 101 and invalid, and this action must be dismissed for failure to state a claim.¹⁰

IV. THROUGHPUTER COPIED ITS CLAIMS FROM AMAZON, AND THUS DID NOT “INVENT” THE CLAIMED SUBJECT MATTER, RENDERING THE CLAIMS INVALID UNDER § 101 AND NECESSITATING DISMISSAL OF THIS ACTION

The asserted patents are invalid because it is apparent from the face of ThroughPuter’s pleadings that it did not invent the subject matter claimed in the asserted patents, but took it from Amazon. 35 U.S.C. § 101 (“Whoever *invents* . . . *may obtain a patent* therefor . . .”) (emphases added). Indeed, in its opposition to Amazon’s motion to dismiss the original complaint, ThroughPuter *admitted* to drafting its patent claims using Amazon’s patents:

ThroughPuter’s continuation applications that matured into the Patents-in-Suit were filed to cover AWS’s accused product and to ensure that ThroughPuter protected the space it is entitled to protect. In doing so, ***ThroughPuter focused on the way Amazon claimed the accused product in patent applications.*** And so long as ThroughPuter’s patents complied with the conditions for patentability—including the written description requirement—ThroughPuter was free to claim its invention as it saw fit.

(Dkt. 43 at 10 (emphasis added); *see also* Opp. (Dkt. 25) at 19.) In other words, in an effort to concoct an infringement claim against Amazon, ThroughPuter *copied* Amazon’s patent claims. It does not dispute that.

Nor could it. As explained above, ThroughPuter filed mirror-image claims of each of the asserted patents *three years after* the respective Amazon patent application published, and *over two years after* the respective Amazon application issued as a patent. (*See supra*, at 6-12.) As

¹⁰ The bar on awarding patents to non-inventors has long been enforced, before the enactment of the America Invents Act (AIA), through pre-AIA Section 102(f). Though the AIA eliminated § 102(f) as a statutory provision, the fundamental tenet that patents may be awarded only to inventors remains, as “[b]oth the Constitution and § 101 still specify that a patent may only be obtained by the person who engages in the act of inventing.” Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 Fed. Cir. Bar J. 435, 451–52 (2012).

shown in ThroughPuter’s own amended complaint and the charts reproduced above, *every* limitation of ThroughPuter’s asserted patent claims is a nearly verbatim copy of a limitation in Amazon’s patent claims, and the text of the three sets of claims includes only a few differences that do not substantively change the scope of the claims. (*See supra*, at pp. 8-9.) ThroughPuter’s amended complaint admits as much: it concedes that there is “substantial identity” between Amazon’s and ThroughPuter’s patent claims, and that the asserted patents claim “substantially the same technology” as Amazon’s patents. (Amend. Compl. ¶¶ 51, 55, 59.) In light of the admittedly trivial differences between the claim sets, ThroughPuter cannot credibly dispute its copying. Indeed, ThroughPuter simply could not have independently arrived at claim language that tracks Amazon patent claims nearly verbatim without having copied them.¹¹

The history of the asserted patents also confirms that ThroughPuter did not invent the claimed subject matter. Whereas each of ThroughPuter’s five parent applications is directed to parallel processing of multiple applications in a multiprocessor system (*see supra*, at pp. 4-6), the asserted claims, in contrast, are directed to resolving security issues arising specifically from the use of FPGAs within a cloud system (*see supra*, at pp. 6-9). There is no reference or explanation in any of ThroughPuter’s parent applications of resolving security issues arising from use of FPGAs, for example, by preventing a reconfigurable logic region from directly accessing the physical interconnect, or by having a reconfiguration logic function provide restricted access to the configuration port from the physical interconnect, or “for separately encapsulating each of the reconfigurable logic regions.” (*See* Amend. Compl., Exs. 1 (’556 patent) at claim 1, 2 (’934 patent) at claim 1, 3 (’682 patent) at claim 1; *see also* Shamilov Decl., Exs. I-M (parent applications).)

¹¹ The Magistrate Judge’s Report and Recommendation regarding Amazon’s Motion to Dismiss the original complaint even acknowledged that independent invention was “unlikely.” (Dkt. 43 at 13.)

The complete absence of supporting disclosure in ThroughPuter’s parent applications confirms that ThroughPuter did not invent what it now claims to have invented—Amazon did—and the Court should dismiss this case under § 101.

The conclusion is further confirmed by the fact that ThroughPuter deliberately, and impermissibly, hid the fact that it copied Amazon’s claims from the Patent Office. Every patent applicant has a duty to “disclose material information” during prosecution of a patent application, and such material information includes any “copying of claims” and the source of the copied claims. *Leviton Mfg. Co. v. Universal Sec. Instruments, Inc.*, 606 F.3d 1353, 1358, 1360-61 (Fed. Cir. 2010); *see also* Manual of Patent Examining Procedure 2001 (9th ed. Rev. 08.2017, June 2020) (describing the duty of disclosure that applies when “patent examination occurs” and to any individual associated “with the filing and prosecution of a patent application”). Here, while ThroughPuter undeniably copied Amazon’s claims as explained above, ThroughPuter failed to disclose that fact, or the issued patents from which ThroughPuter copied the claims, to the Examiner.¹² (*See supra*, at p. 10.) Instead, ThroughPuter merely took the earlier applications and made wholesale changes to their titles, abstracts and/or claims. (*See supra*, at pp. 6-9; *see also* Dkt. 43 at 6.) And in doing so, ThroughPuter transformed the focus of its patents from parallel processing of multiple applications in a multiprocessor system, to a completely different technology, unrelated to any disclosure in ThroughPuter’s parent applications—resolving security issues on an FPGA platform. (*Id.*) Thus, ThroughPuter’s statement that its amendments

¹² Though not at issue in this motion, ThroughPuter’s deliberate and intentional acts of copying Amazon’s claims and hiding the fact from the Patent Office by making misrepresentations is nothing short of inequitable conduct or fraud on the Patent Office. *See TecSec, Inc. v. Int’l Bus. Machs. Corp.*, 763 F. Supp. 2d 800, 811 (E.D. Va. 2011) (“the copying of claims from another’s patent application without disclosing that to the PTO Examiner raises significant suspicions of invalidity or inequitable conduct”).

introduced “no new matter” is, on its face, false, and only evidences ThroughPuter’s deliberate intention to hide its copying from the Patent Office. As a result, the Patent Office allowed the asserted patents without knowing the true source of their claims. But because ThroughPuter did not invent what its patents claim—but rather copied them from Amazon, the same entity that ThroughPuter now accuses of infringement—the Court should find the allowed claims ineligible and invalid under § 101. This action thus must be dismissed.

V. THROUGHPUTER’S BAREBONE ALLEGATIONS AND UNPLED § 112 ARGUMENTS DO NOT AND CANNOT PLAUSIBLY ALLEGE INVENTORSHIP

No allegation in ThroughPuter’s complaint changes the conclusion that ThroughPuter did not invent what it now claims to have invented. In its amended complaint, ThroughPuter alleges that Mark Sandstrom, its President, “is the sole and true inventor” of each asserted patent. (Amend. Compl. ¶¶ 68, 112, 150.) But this is a legal conclusion for which ThroughPuter provides no *factual* support, and the Court need not credit such a conclusory assertion. *Iqbal*, 556 U.S. at 678; *Kaiser Aluminum*, 677 F.2d at 1050. ThroughPuter also makes allegations in its amended complaint regarding Mark Sandstrom’s speaking engagements and articles, and ThroughPuter’s general development efforts. (See Amend. Compl. ¶¶ 36-42.) But none of these paragraphs reference the claimed invention, let alone any mechanism for resolving security issues that arise when FPGAs are offered as part of a cloud computing service. (See *supra*, 6-12.) Nor do any of ThroughPuter’s allegations support inventorship at the critical time period, *i.e.*, prior to the filing or issuance of Amazon’s patents.

Moreover, the § 112 arguments ThroughPuter raised in its opposition to Amazon’s original motion to dismiss, and will likely raise again in opposition to this motion, are irrelevant to the relief Amazon seeks. Under well-established Federal Circuit law, patent claims must “reflect what the inventor actually invented *at the time of the earlier application.*” See *Leviton Mfg. Co.*, 606 F.3d

at 1360 (emphasis added). Accordingly, “[i]t is not enough for [a patentee] to claim that the earlier specification does in fact support the claims”—rather, even if a patentee can cobble together alleged support in the specification after the fact, a patent is nonetheless invalid if it does not name the true inventor. *Id.* Yet, that is exactly what ThroughPuter seeks to do here. In its opposition to Amazon’s original Motion to Dismiss, ThroughPuter cited extensively to its patent applications from 2013 and 2014, arguing that these applications contain adequate written description of the later-issued claims and thus supported its claim of invention. (Dkt. 25 at 4-8.) But whether the disclosures in these applications include words and phrases that one can piece together to overcome a § 112 challenge is irrelevant to the present § 101 challenge and whether Mr. Sandstrom *invented* the later-issued claims. *Leviton Mfg. Co.*, 606 F.3d at 1360.¹³

Indeed, ThroughPuter asks the Court to accept a truly inconceivable story: ThroughPuter independently came up with the claimed inventions before Amazon, but claimed them only after it learned of Amazon’s patents issued by the Patent Office years before, and used nearly identical language that Amazon previously chose for Amazon’s inventions. The only *plausible* conclusion is that ThroughPuter did not invent what it claims and instead copied its claims from Amazon.

VI. CONCLUSION

The patents ThroughPuter assert in this action are invalid because ThroughPuter, and the inventor named in the patents, did not invent the claimed subject matter, but copied it from Amazon. Accordingly, Amazon asks the Court to dismiss Plaintiffs’ complaint with prejudice under Rule 12(b)(6).

¹³ Notably, the amended complaint includes no allegations regarding purported written description in priority applications. (Dkt. 43 at 11-12, 17-19.)

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served to all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system.

Dated: August 28, 2023

/s/ Saina S. Shamilov

Saina S. Shamilov